IN THE CLAIMS:

1. (previously presented) An imaging device comprising:

a) a means for illuminating at least one illumination point on an observed zone of an observed plane by means of an illumination light beam,

b) a means for selecting, in the light coming from the observed plane, the light coming from said illumination point,

c) a means for forming an image of said illumination point from the selected light coming from said illumination point,

d) a scanning system for displacing said illumination point on the observed zone and for simultaneously displacing the image of said illumination point, in order to scan an observed zone and form a first image of the observed zone,

e) a sensor which detects the first image,

characterized in that:

f) it comprises a means for selecting, in the light coming from the observed plane, the light coming from a band surrounding said illumination point,

g) it comprises a means for forming an image of said band from the selected light coming from said band,

h) the scanning system is arranged so as to simultaneously displace said illumination point and the image of said band, in order to form a second image of the observed zone from the selected light coming from said band,

i) it comprises a sensor which detects the second image,

j) it comprises a means for combining the first and second images of the observed zone to form a third image of the observed zone.

2. (previously presented) The device as claimed in claim 1, characterized in that said means for combining said first and second images determine the difference between the first image modified by a first multiplier coefficient and the second image modified by a second multiplier coefficient.

3. (previously presented) The device as claimed in claim 1 , characterized in that said band is a ring that is concentric to said illumination points.

4. (previously presented) The device as claimed in claim 1, characterized in that it comprises a plurality of illumination points and a plurality of bands, each of said bands surrounding a corresponding illumination point.

5.(Previously presented)The device as claimed in claim 4, characterized in that the means for illuminating the plurality of illumination points comprise an array of microlenses which separate a laser beam into a plurality of subbeams, each focused on one illumination point.

6.(previously presented)The device as claimed in claim 1, characterized in that it comprises a single illumination point, and in that the means for illuminating the illumination point comprises a lens which focuses a laser beam on the illumination point.

7.(previously presented) The device as claimed claim 1 , characterized in that the means for selecting the light consist of the superposition of a first opaque plate comprising at least one transparent disk and of a second opaque plate comprising at least one transparent disk and at least one transparent ring, as well as a means for moving the second plate in translation with respect to the first, so as to bring the disk of the second plate opposite the disk of the first plate during acquisition of the first image and so as to then bring the ring of the second plate opposite the disk of the first plate during acquisition of the second image.

8. (previously presented) The device as claimed in claim 4 , characterized in that:

- the means for selecting the light comprise a mask composed of transparent or reflective microprisms which make it possible to send in a first direction the light coming from the illumination points and constituting a first beam and to send in a second direction the light coming from the bands and constituting a second beam,
- the device comprises a means for forming the first image from the first beam,
- the device comprises a means for forming the second image from the second beam.

9 (Previously presented). The device as claimed in claim 8, characterized in that it comprises:

- an intermediate lens for sending the first and the second beam into a separation zone where they are spatially separated,
- at least one prism or one mirror which is placed in the separation zone, in order to modify the direction of at least one of the first and second beams.

10. (Previously presented)The device as claimed in claim 9, characterized in that it comprises a lens which is simultaneously passed through by the first and the second beam after the separation zone, and which forms the first and the second image in two distinct zones of the same image plane.

11. (previously presented) The device as claimed in claim 8 , characterized in that:

- it comprises a first aperture diaphragm which is passed through by the illumination light beam before it reaches the mask composed of transparent or reflective microprisms,

- it comprises a second aperture diaphragm which is passed through by the illumination light beam coming from the mask and directed toward the observed object,
- the first aperture diaphragm is positioned such that the part of the illumination beam which reaches a zone of the mask which transmits said second beam is then stopped by the second aperture diaphragm, and such that the part of the illumination beam which reaches a zone of the mask which transmits said first beam then passes through the second aperture diaphragm.

12. (previously presented) The device as claimed in claim 1 , characterized in that the selection means are fixed masks and in that the scanning system consists of a moveable mirror.

13 to 22.(cancelled)

23 (previously presented) An imaging method comprising the steps of:

a) illuminating at least one illumination point on an observed zone of an observed plane,

b) selecting, in the light coming from the observed plane, the light coming from said illumination point,

c) forming an image of said illumination point from the selected light coming from said illumination point,

d) displacing said illumination point on the observed zone and simultaneously displacing the image of said illumination point, in order to scan an observed zone and form a first image of the observed zone,

e) detecting the first image,

characterized in that it comprises the steps of:

f) selecting, in the light coming from the observed plane, the light coming from a band surrounding said illumination point,

g) forming an image of said band from the selected light coming from said band,

h) simultaneously displacing said illumination point and the image of said band, in order to form a second image of the observed zone from the selected light coming from said band,

i) detecting the second image,

j) combining the first and second images of the observed zone to form a third image of the observed zone.

24. (Previously presented) The method as claimed in claim 23, characterized in that said step of combining said first and second images determine the difference between the first image modified by a first multiplier coefficient and the second image modified by a second multiplier coefficient.

25. (Previously presented) The method as claimed in claim 23 , characterized in that said band is a ring that is concentric to said illumination points.

26 (Previously presented) The method as claimed in claim 3, characterized in that the step of illuminating at least one illumination point is a step of illuminating a plurality of illumination points, each illumination point being surrounded by a corresponding band, and wherein the step of detecting the light coming from a band detects the light coming from each of the bands corresponding to each illumination point.

27 (Previously presented) The device of claim 1, further comprising means to select, in the light coming from the observed plane, light having a different wavelength than the illumination light beam, to generate a fluorescence image.

28 (Previously presented) The method of claim 23, wherein each step of selecting further selects light having a different wavelength than the wavelength of the light used for illuminating the observed plane, to generate a fluorescence image.